REPORT

ON THE

ARBORICULTURAL OPERATIONS,

N.-W. PROVINCES AND OUDH,

For the year ending 31st March 1894.

ALLAHABAD:

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FROM

F. E. TAYLOR ESQ.,

OFFG. DIRECTOR OF LAND RECORDS AND AGRICULTURE,

NORTH-WESTERN PROVINCES AND OUDH,

TO

THE CHIEF SECRETARY TO GOVERNMENT,

NORTH-WESTERN PROVINCES AND OUDH.

Dated Lucknow, the 6th November 1894.

SIR,

I HAVE the honor to submit for the orders of His Honor the Lieutenant-Governor and Chief Commissioner, the annual report on arboricultural operations in these provinces for the year ending 31st March 1894.

2. *Length of Avenues.*—The total length of roads under avenues as returned in last year's report was 7,799 miles. Some of the District Boards have this year also brought into the statements several avenues hitherto omitted, and from the returns received it appears that the actual length at the beginning of 1893-94 was 8,012 miles to which 219 miles were added during the year under report making a total of 8,231 miles.

3. *Avenues on each class of road.*—Appendix A. shows the extent to which the various classes of roads have been planted in each district. Several District Boards have revised the figures returned by them last year.

The total length of first class roads was returned last year as 4,674 miles, but from the district reports received this year it appears that the actual length is 4,800 miles, of which 3,683 miles or 77 per cent. have been provided with avenues. The largest additions during the year under review were made in Bulandshahr (10 miles), Meerut (7 miles) and Moradabad (11 miles). In addition to the districts of Muzaffarnagar, Muttra and Agra noticed in last year's report, the whole of the first class roads in Cawnpore have been shown as planted. As under recent orders the services of District Engineers can be utilized, where necessary, in looking after trees on first class roads as part of their official duty, much improvement is expected in other districts especially in Aligarh, Moradabad and Fatehpur, where more than half of the length of such roads is still unplanted.

4. Of the second class roads 2,785 miles out of 7,081 miles or 39 per cent. of the total length have been provided with avenues. The districts in which the largest additions were made are Saháranpur (14 miles), Jaunpur (13 miles) and Sitapur (18 miles). Of the third and fourth class roads 14 per cent. and 5 per cent. respectively of the total length are shown as planted.

5. *Mileage of avenues, &c.*—The following table shows by Divisions the number of miles under avenues and of trees planted during 1893-94, figures for each district being given in Appendix B :—

Division.	Length of avenues under operation during 1893-94.	Total length of avenues at the close of 1892-93.	Length of new avenues planted during 1893-94.	Total length of avenues at the close of 1893-94.	Total number of trees planted during 1893-94.
Meerut	536	781	47	828	21,884
Agra	424	1,399	7	1,406	11,806
Rohilkhand...	467	741	37	778	6,520
Allahabad	827	1,907	24	1,931	8,829
Benares	338	726	33	759	11,511
Gorakhpur	149	415	2	417	1,679
Kumaun	47	43	4	47	775
Lucknow	443	845	54	899	7,199
Fyzabad	387	1,155	11	1,166	12,384
Total ...	3,618	8,012	219	8,231	82,587

The number of miles planted in the previous years and under operation in 1893-94 was 3,399 miles, showing a decrease of 148 miles as compared with last year. There was, however, an increase of 34 in the number of miles newly planted with trees, the figures for the two years being 219 and 185 respectively. The total length of roads under operation during the year was thus 3,618 miles as compared with 3,732 miles in the previous year, showing a net decrease of 114 miles. The largest additions of new avenues are reported to have been made in Saháranpur (18 miles), Bulandshahr (14), Moradabad (16), Jaunpur (21) and Sitapur (27). The operations in the districts noted on the margin* were on the other hand mainly confined to the maintenance of avenues planted in previous years. Much of the arboriculture grant is absorbed in maintaining existing avenues, and the Commissioner of Agra remarks that the funds at the disposal of several District Boards in his Division are insufficient to pay for fresh avenues.

Meerut Division ...	Dehra Dún.
Agra do. ...	Muttra. Mainpuri. Etáwah. Etah.
Allahabad Division ...	Allahabad.
Benares do. ...	Benares.
Gorakhpur do. ...	Gorakhpur. Basti.
Fyzabad do. ...	Bahraich. Partábgarh. Bara Banki.

The number of trees planted in 1893-94 was 82,587 as against 95,387 in the preceding year; and the expenditure on avenues was in all Rs. 58,944 compared with Rs. 58,746. Of the total expenditure Rs. 45,782 was spent on the maintenance of avenues planted previously and Rs. 13,162 on new avenues.

6. *Supervision of road side arboriculture.*—Arboriculture is generally entrusted to Tahsildars. Under the instructions issued in 1879 when the work was transferred to this Department, assistance is also received from the officers of the Public Works Department.

Orders have been recently issued authorizing Commissioners to desire the District Engineers, where necessary, to look after trees on first class roads as part of their official duties. The operations on first class roads have accordingly been entrusted to the District Engineers in Dehra Dún, Aligarh, Farukhabad, Muttra, Moradabad, Baeti, Azamgarh and Lucknow. In Etáwah where the Local Boards do not show much interest, it is proposed to transfer arboriculture on first class roads to the District Engineer; whereas in Gházipur, Budaun, Sháhjahánpur, Azamgarh and Gorakhpur, where most of the work was formerly in charge of the Engineer, it was resumed by the District Boards. The Superintendent, Botanical Gardens, continued in charge of arboriculture in the Saháranpur district, and his advice was available to neighbouring districts, though the only District Boards which applied to him for assistance on arboricultural matters were those of Bulandshahr and Muzaffarnaggar.

7. *Necessity of protection for young trees.*—As remarked in last year's report it is much better for the Boards to have a little work well done than to attempt large

extensions of their avenues without due regard to the future maintenance of the trees that are planted. The Commissioner of Allahabad in his review of the Bánda report, suggests that to avoid the trouble of protection of young trees on scattered roads operations may be confined to selected portions only where tangible permanent results may be obtained. Due attention, however, appears to have been paid in the majority of districts to the preservation of the trees already planted.

8. *Tree guards.*—The different methods of protecting trees have been described in the last year's report. Iron *thaolas* introduced by Mr. Lambe into the Jalaun district have been found very satisfactory. In Dehra Dún 70 wire tree guards were made at Rs. 2 each. Some wooden *thaolas* have been constructed in the Mainpuri district, but the Commissioner remarks that they are not as efficient as a mud *thaola* with a narrow ditch round it. Mr. J. Nisbet, Deputy Director of the Dehra Dún Forest School, writes that wherever any thorny scrub is procurable there can be no cheaper or better tree protector than binding that round the stems to the height required and fixing it by means of three strands of wire, one near the top, one in the middle and one near the base: the wire gives way with the growth of the stem and finally the thorny scrub rots away but can be replaced, if required.

9. *Irrigation.*—The method adopted for watering the young trees is not mentioned in many of the District reports. The Ghara system of watering continues in the districts of Hamírpur and Benares, while the District Board of Bareilly intend to introduce it.

10. *Description of trees planted.*—As recommended in the last year's report, Babul trees have been tried in the Unao and Jaunpur districts. The Chairman of the Jaunpur District Board notes that far too many 'Siris' and 'Nim' trees have been planted in that district, that the 'Dithori' tree is useless and that the 'Sissoo' tree might well be substituted for many of those that have been planted. Mr. J. Nisbet, Deputy Director of the Dehra Dún Imperial Forest School, urges the desirability of selecting for road side planting only such trees as do not throw out long straggling surface-roots which rob the agricultural land of moisture and mineral food.

11. *Assistance from private persons.*—Zamíndárs and other private individuals planted trees or maintained avenues on public roads at their own expenses in Mainpuri, Etah, Cawnpore, Fatehpur, Allahabad, Jaunpur, Benares, Ballia, Gorakhpur, Sitapur, Hardoi, Bahraich and Gonda. To promote private enterprise in Saháranpur, rules have been framed and are under the consideration of the District Board. In Sultánpur also, private persons are encouraged to plant trees. The Commissioner thinks that in Mainpuri the assistance of the zamíndárs on 4th class roads might be more extensively invoked. In Allahabad it is reported that private persons are taking an increasing interest in arboriculture and that the results will be more satisfactory in future. In Jaunpur the objection on the part of the rural population to plant trees, reported last year, has been to some extent overcome, a result due to the interest taken in the matter by the Tahsíldar of Karakat (Munshi Ghulam Baki) in whose Tahsíl nine miles of new avenue have been planted by zamíndárs.

In Farukhabad claims made by zamindárs to roadside trees have resulted in a suit against the Secretary of State. To prevent such disputes it is essential that wherever planting by private persons is allowed, a record should be kept of all trees belonging to them.

12. *Nurseries.*—The system of maintaining local nurseries produces better results than the maintenance of a single nursery at head-quarters. Thirty additional nurseries were opened during the year and the total number maintained rose from 220 to 250. The number of trees left in the nurseries at the close of 1892-93 was 2,85,654 to which were added 1,76,262 during the year under review making a total of 4,61,916. Of this number 1,42,574 were taken out and planted during the year, leaving a balance of 3,19,342 at the close of the year. The expenditure on nurseries was Rs. 9,531 against Rs. 10,279 in the previous year.

The number of groves rose from 90 to 95, the area under groves being increased from 634 to 640 acres. The expenditure amounted to Rs. 2,518 as compared with 2,164 in 1892-93.

13. *Expenditure and income.*—The total expenditure and income of each district for the last six years are given in Appendix D. The divisional figures for the year under review are shown in the following table; similar detailed statistics for each district being returned in Appendix C :—

Division.	Charges.				Receipts.		
	Avenues.	Groves and nurseries.	Loppings and fellings.	Total.	Loppings and fellings.	Fruits, Grass, &c.	Total.
Meerut	11,809	2,463	143	14,415	16,559	1,197	17,756
Agra	9,808	1,093	97	10,498	4,537	2,287	6,824
Rohilkhand ...	7,508	676	13	8,197	2,897	6,832	9,729
Allahabad	14,032	2,504	242	16,778	4,186	2,461	6,647
Benares	4,659	983	145	5,787	3,140	2,652	5,792
Gorakhpur ...	2,181	736	285	3,202	1,054	958	2,012
Kumaun	239	951	...	1,190	20	128	148
Lucknow	4,130	2,198	189	6,517	2,042	1,578	3,620
Fyzabad	5,078	445	172	5,695	2,576	2,671	5,247
Total ...	58,944	12,049	1,286	72,279	37,011	20,764	57,775

The expenditure amounted to Rs. 72,279 against Rs. 72,229 in 1892-93 and the receipts to Rs. 57,775 as compared with Rs. 41,937. The actual cost to Government was thus Rs. 14,504 or less than half that of the preceding year (Rs. 30,292).

14. *Receipts.*—In addition to the districts of Bulandshahr, Bijnor, Pilibhít, Benares and Gonda, noticed in last year's report, the income exceeded the expenditure in Meerut, Aligarh, Mainpuri, Budaun, Moradabad, Cawnpore and Bara Banki; while the districts of Allahabad, Basti, Gházipur and Unao, realised an income which nearly covered their expenditure. As compared with last year there was an increase in the receipts of all but ten districts of the United Provinces. In the nine noted on the margin the decrease was slight and calls for no special remark. In Partábgarh which was shown as self-supporting last year receipts fell from Rs. 842 in 1892-93 to Rs. 486 and is attributed to abnormal sale of Babul trees in the previous year, which swelled the receipts, and to less lopping and failure of the mango crop in the year under report. The increase occurred mostly in Sahárnpur, Muzaffarnagar, Meerut, Aligarh, Agra, Farukhabad, Budaun, Moradabad, Hamírpur, Allahabad, Sitapur and Bara Banki, and was chiefly due to judicious pruning and felling of old and decaying trees. The only districts in which the income did not amount to even half of the expenditure incurred were :—

Muttra.	Gorakhpur.
Etah.	Hardoi.
Bijnor.	Kheri.
Bánda.	Sultánpur.
Benares.	

Name of district.	Charges in 1893-94.	Receipts in 1893-94.	Receipts in 1892-93.
	Rs.	Rs.	Rs.
1. Dehra Dún	399	81	6
2. Almora	300	5	...
3. Garhwál	890	143	102
4. Bánda	2,460	345	366
6. Hamírpur	1,457	671	381
6. Jhánsi	5,814	750	590
7. Jalaun	2,100	493	283
8. Muttra	1,800	658	826
9. Etáwah	1,017	307	203
10. Ballia	400	131	61
11. Gorakhpur	1,574	685	764
12. Rae Bareli	1,300	334	254
13. Hardoi	1,600	752	757
14. Kheri	281	75	98

The first three are hilly districts where arboriculture is naturally expensive. Numbers 4 to 7 are the Bundelkhand districts south of the Jumna where also arboriculture is very difficult owing to the nature of the soil. The small income in these districts was noticed by Government, who drew the Allahabad Commissioner's attention to the matter, in reviewing the Administration Report of the Department for 1891-92, and the recent efforts of the District Boards have resulted in an improvement in the receipts of 1893-94 over those of the preceding year.

In Muttra the decline in receipts is continuous. In this district the whole of the first and second class roads have been provided with avenues and the work has now been transferred to the District Engineer from whose action better results are anticipated. Lieutenant Watts-Jones, R. E., late District Engineer of the Muttra District, has suggested that greater profits would be obtained without loss of shade if old trees were felled before they became hollow and rotten. This is so evident a proposition that it is surprising if it is not acted upon by all District Boards. In Etáwah and Ballia where a decline was noticed in the last year's report, the receipts of 1893-94 show an increase over those of 1892-93. The Commissioner considers that in Gorakhpur, where the receipts have fallen from Rs. 764 to Rs. 685, a larger amount should have been realized if effective supervision were exercised : the members of the District and Local Boards take very little interest in the subject of arboriculture which was attended to by the Tahsíldars.

15. *Tree planting otherwise than on road sides.*—Almost all the district reports this year are silent on this subject. The Commissioner of Kumaun suggests the formation of a chír reserve in Garhwál by enclosure of a certain area on the hill side with stone walls in order to protect the young trees against grazing. The formation of mango groves and planting of mango trees along the pilgrim route is also advocated. It is reported that the zamíndárs in the district are anxious to plant timber trees, but that they have no land for the purpose. As remarked by the Commissioner, the land might be given them rent-free on certain conditions and by this means a start made in forestry on the bare hills of the Garhwál district.

16. Vernacular copies of that part of the Manual of arboricultural circulars compiled last year, which deals with actual tree planting, have been printed and circulated among the District Boards and Tahsíldars with a view to enable them to supervise the work properly.

17. In order to enable the District Boards to exercise a closer control over the Tahsíldars, the preparation of an arboricultural map was suggested as noticed in last year's report. With the exception of Almora, Garhwál, Naini Tal and Fyzabad sketch maps showing the position of the various avenues have been received from all districts. A provincial map compiled from these forms Appendix E. to this Report. It shows at a glance what sections of different roads have been provided with avenues and what are yet to be planted, as also the work undertaken during the year under report and the districts in which work has been done by private enterprise. The map is the first of its kind and may possibly be incomplete in some respects.

18. The large excess in receipts bears evidence to the care with which the arboricultural operations have generally been carried out this year throughout the Province. In Cawnpore, Gorakhpur, Muzaffarnagar and Etáwah, lack of interest in the work is, however, noticed by the local authorities. The Commissioners of Agra, Allahabad, Gorakhpur and Kumaun, have taken special interest in the work of arboriculture, and have carefully reviewed the district reports and issued necessary instructions to the District Boards.

The following Appendices accompany the report :—

A.—Showing the lengths planted and unplanted of each class of road in each district.

B.—Giving statistics of the operations of the year on Roads, Groves, and Nurseries.

C.—Showing detail of receipts and expenditure in 1893-94.

D.—Comparing the total Receipts and Charges in each district during the last six years.

E.—Arboricultural Map showing the sections of roads provided with avenues.

I have the honor to be,

SIR,

Your most obedient servant,

F. E. TAYLOR,

Officiating Director.

APPENDIX A.

Statement showing the extent to which the various classes of roads have been planted in each district, up to the end of 1893-94.

	First-class roads.			Second-class roads.			Third-class roads.			Fourth-class roads.			Total.		
	Length.	Avenue.	Unplanted.	Length.	Avenue.	Unplanted.	Length.	Avenue.	Unplanted.	Length.	Avenue.	Unplanted.	Length.	Avenue.	Unplanted.
... ...	14	8	6	64	8	56	162	...	162	68	...	68	308	16	292
... ...	82	70	12	276	116	160	73	...	73	52	...	52	483	186	297
... ...	62	62	...	175	98	77	149	63	86	29	...	29	415	223	192
... ...	155	104	51	104	...	104	214	4	210	49	...	49	522	108	414
... ...	149	123	26	108	72	36	138	14	124	246	...	246	641	209	432
... ...	195	76	119	66	6	60	235	4	231	64	...	64	560	86	474
Total, Meerut Division ...	657	443	214	793	300	493	971	85	886	508	...	508	2,929	828	2,101
... ...	168	168	...	119	119	...	51	...	51	135	...	135	473	287	186
... ...	130	130	...	201	99	102	201	2	199	59	...	59	591	231	360
... ...	148	135	13	259	40	219	419	19	400	200	3	197	1,026	197	829
... ...	185	139	46	127	33	94	63	2	61	22	...	22	397	174	223
... ...	77	76	1	128	107	21	331	178	153	...	...	...	536	361	175
... ...	133	82	51	194	64	130	84	7	77	212	3	209	623	156	467
Total, Agra Division ...	841	730	111	1,028	462	566	1,149	208	941	628	6	622	3,646	1,406	2,240
... ...	133	103	30	85	59	26	102	28	74	...	...	...	320	190	130
... ...	34	25	9	107	41	66	438	7	431	51	...	51	630	73	557
... ...	93	76	17	109	43	66	259	21	238	102	4	98	563	144	419
... ...	88	38	50	206	42	164	311	32	279	...	...	...	605	112	493
... ...	98	94	4	79	52	27	126	59	67	89	...	89	392	205	187
... ...	12	11	1	118	42	76	162	1	161	19	...	19	311	54	257
Total, Rohilkhand Division ...	458	347	111	704	279	425	1,398	148	1,250	261	4	257	2,821	778	2,043
... ...	174	174	...	92	66	26	617	339	278	134	59	75	1,017	638	379
... ...	183	90	93	126	4	122	152	...	152	77	...	77	538	94	444
... ...	112	74	38	61	23	38	103	14	89	392	15	377	668	126	542
... ...	80	59	21	115	25	90	81	31	50	215	...	215	491	115	376
... ...	171	153	18	162	108	54	99	76	23	383	105	278	815	442	373
... ...	269	231	38	147	90	57	637	98	539	...	...	...	1,053	419	634
... ...	116	81	35	69	8	61	248	5	243	220	3	217	653	97	556
Total, Allahabad Division ...	1,105	862	243	772	324	448	1,937	563	1,374	1,421	182	1,239	5,235	1,931	3,304
... ...	126	121	5	229	164	65	133	38	95	92	11	81	580	334	246
... ...	148	96	52	141	7	134	152	...	152	584	...	584	1,025	103	922
... ...	175	131	44	97	70	27	251	12	239	55	1	54	578	214	364
... ...	111	64	47	86	4	82	246	...	246	160	...	160	603	68	535
... ...	33	28	5	60	11	49	215	...	215	86	1	85	394	40	354
Total, Benares Division ...	593	440	153	613	256	357	997	50	947	977	13	964	3,180	759	2,421
... ...	60	54	6	474	157	317	494	17	477	...	...	...	1,028	228	800
... ...	67	56	11	159	34	125	451	...	461	...	...	...	687	90	597
... ...	132	66	66	71	33	38	321	...	321	127	...	127	651	99	552
Total, Cawnpur Division ...	259	176	83	704	224	480	1,276	17	1,259	127	...	127	2,366	417	1,949
... ...	30	27	3	14	10	4	...	...	...	...	...	...	44	37	7
... ...	...	...	...	421	8	413	711	2	709	...	...	...	1,132	10	1,122
... ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total, Etawah Division ...	30	27	3	435	18	417	711	2	709	...	...	...	1,176	47	1,129
... ...	104	81	23	94	10	84	34	...	34	67	...	67	299	91	208
... ...	80	55	25	178	80	98	200	83	117	41	8	33	499	226	273
... ...	66	40	26	161	66	95	...	...	...	...	...	...	227	106	121
... ...	107	88	19	76	39	37	133	33	100	33	...	33	349	160	189
... ...	63	37	26	200	115	85	268	47	221	72	2	70	603	201	402
... ...	29	24	5	58	33	25	374	58	316	189	...	189	650	115	535
Total, Lucknow Division ...	449	325	124	767	343	424	1,009	221	788	402	10	392	2,627	899	1,728
... ...	74	73	1	175	132	43	325	13	312	176	...	176	750	218	532
... ...	79	62	17	235	164	71	153	121	32	125	18	107	592	365	227
... ...	...	...	...	116	64	52	365	56	309	121	5	116	602	125	477
... ...	88	56	32	225	2	223	72	...	72	401	...	401	786	58	728
... ...	47	40	7	228	34	194	130	11	119	159	...	159	564	85	479
... ...	120	102	18	286	183	103	93	15	78	101	15	86	600	315	285
Total, Faizabad Division ...	408	333	75	1,265	579	686	1,138	216	922	1,083	38	1,045	3,894	1,166	2,728
Grand Total, N.-W. P. and Oudh ...	4,800	3,683	1,117	7,081	2,785	4,296	10,586	1,510	9,076	5,407	253	5,154	27,874	8,231	19,643

APPENDIX B.

Statement showing the length of miles planted with trees and the number of nurseries and groves maintained in each district, during the year 1893-94.

District.	Roads. Length of avenues. Length of avenues at the end of 1892-93.	Roads. Length of avenues. Length of avenues planted in 1893-94.	Roads. Length of avenues. Total length of avenues at the end of 1893-94.	Roads. Miles under operation. Planted in previous year.	Roads. Miles under operation. New.	Roads. Miles under operation. Total.	Number of trees planted.	Groves. Number of groves.	Groves. Planted in previous year.	Groves. Planted during 1893-94.	Groves. Total.	Nurseries. Number of Nurseries.	Nurseries. Total number of trees at the close of 1892-93.	Nurseries. Trees planted during 1893-94	Nurseries. Total.	Nurseries. Number of trees taken out during 1893-94.	Nurseries. Balance.
	Miles	Miles	Miles						Acs.	Acs.	Acs						
Dehra Dún	16	...	16	12	..	12	2,357	...	...	..	...	2	1,204	150	1,354	260	1,094
Saháranpur	168	18	186	42	18	60	3,764	...	...	...	...	1	8,167	4,116	12,283	4,673	7,610
Muzaffarnagar ...	217	6	223	127	6	133	6,219	2	52	...	52	1	9,056	1,702	10,758	2,906	7,852
Meerut	101	7	108	80	7	87	2,382	...	...		...	8	3,150	961	4,111	3,011	1,100
Bulandshahr	195	14	209	164	14	178	4,936	6	233	...	233	4	6,876	12,910	19,786	8,030	11,756
Aligarh	84	2	86	64	2	66	2,226	4	70	...	70	14	13,971	10,228	24,199	3,970	20,229
Total, Meerut Division ...	781	47	828	489	47	536	21,884	12	355	...	355	30	42,424	30,067	72,491	22,850	49,641
Muttra	287	...	287	62	...	62	2,350	4	1	...	1	4	1,912	4,495	6,407	2,003	4,404
Agra	229	2	231	60	2	62	2,992	.	...	.	...	7	12,386	10,912	23,298	6,298	17,000
Farukhabad	192	5	197	21	5	26	1,675	...	...	...	...	7	6,922	3,471	10,393	2,049	8,344
Mainpuri	174	...	174	60	...	60	920	4	23	...	23	1	2,925	990	3,915	1,175	2,740
Etáwah	361	...	361	162		162	1,647	...	...	...		5	3,167	1,959	5,126	2,363	2,763
Etah	156	...	156	52	...	52	2,222	...	...	...	...	2	11,926	1,250	13,176	6,273	6,903
Total, Agra Division ...	1,399	7	1,406	417	7	424	11,806	8	24	...	24	26	39,238	23,077	62,315	20,161	42,154
Bareilly	186	4	190	159	4	163	524	...	...	...	...	...	...	...	..	...	...
Bijnor	71	2	73	71	2	73	250	5	4	...	4	7	3,062	573	3,635	586	3,049
Budaun	140	4	144	72	4	76	2,777	2	2	...	2	4	10,106	5,019	15,125	2,900	12,225
Moradabad	96	16	112	21	16	37	879	...	...	...	...	2	3,722	200	3,922	400	3,522
Shahjahánpur.	197	8	205	81	8	89	1,305	...	...	...	...	3	14,865	2,825	17,690	2,442	15,248
Pilibhít	51	3	54	26	3	29	785	...	...	...	...	1	1,065	1,100	2,165	1,048	1,117
Total, Rohilkhand Division,	741	37	778	430	37	467	6,520	7	6	...	6	17	32,820	9,717	42,537	7,376	35,161
Cawnpore	629	9	638	33	9	42	1,762	2	17	...	17	4	3,254	1,214	4,468	1,968	2 500
Fatehpur	92	2	94	37	2	39	768	2	17	...	17	8	1,167	2,920	4,087	283	3,804
Bánda	124	2	126	124	2	126	295	2	4	...	4	16	7,151	7,868	15,019	3,872	11,147
Hamírpur	111	4	115	51	4	55	811	...	...	...	...	10	5,969	2,819	8,788	2,173	6,615
Allahabad	442	...	442	148	...	148	1,731	2	3	..	3	6	10,490	10,059	20,549	6,222	14,327
Jhánsi	414	5	419	358	5	363	2,173	15	47	...	47	12	7,111	5,978	13,089	4,143	8,946
Jalaun	95	2	97	52	2	54	1,289	4	...	1	1	10	6,006	4,444	10,450	2,242	8,208
Total, Allahabad Division ..	1,907	24	1,931	803	24	827	8,829	27	88	1	89	66	41,148	35,302	76,450	20,903	55,547
Benares	334	...	334	35	...	35	9	6	22	...	22	1	*	*	*	*	*
Mirzapur	97	6	103	70	6	76	1,437	...	...	...	...	9	5,479	3,173	8,652	1,861	6,791
Jaunpur	193	21	214	175	21	196	7,732	5	3	...	3	19	8,671	8,374	17,045	7,782	9,263
Gházipur	61	4	68	17	4	21	1,505	2	5	...	5	1	8,047	621	8,668	1,630	7,038
Ballia	38	2	40	8	2	10	828	2	5	...	5	1	4,205	135	4,340	3,230	1,110
Total, Benares Division ...	726	33	759	305	33	338	11,511	15	35	...	35	31	26,402	12,303	38,705	14,503	24,202
Gorakhpur	228	...	228	100	...	100	...	2	33	..	33	5	8,615	5,079	13,694	8,437	5,257
Basti	90	...	90	21	...	21	1,089	3	6	1	7	2	2,024	1,883	3,910	718	3,192
Azamgarh	97	2	99	26	2	28	590	1	13	...	13	1	1,217	394	1,611	590	1,021
Total, Gorakhpur Division...	415	2	417	147	2	149	1,679	6	52	1	53	8	11,856	7,359	19,215	9,745	9,470
Almora	35	2	37	35	2	37	505	...	...	...	...	3	5,182	1,143	6,325	4,882	1,443
Garhwál	8	2	10	8	2	10	270	...	...	...	...	2	20,953	7,862	28,815	11,736	17,079
Naini Tal	...	..	..	...		...	...	...	...	...	..	...	...	...	...	...	..
Total, Kumaun Division ...	43	4	47	43	4	47	775	...	...		...	5	26,135	9,005	35,140	16,618	18,522
Lucknow	89	2	91	11	2	13	...	1	3	...	3	1	16,220	8,395	24,615	5,555	19,060
Unao	223	3	226	24	3	27	476	1	2	...	2	5	2,117	513	2,630	1,207	1,423
Rae Bareli	97	9	106	40	9	49	2,189	...	...	...	...	10	6,925	6,373	13,298	2,770	10,528
Sitapur	133	27	160	133	27	160	3,900	4	4	...	4	10	3,727	14,980	18,707	1,973	16,734
Hardoi	197	4	201	92	4	96	634	9	57	...	57	10	4,333	901	5,234	2,490	2,744
Kheri	106	9	115	89	9	98	...	.	...	..	...	1	1,601	1,099	2,700	588	2,112
Total, Lucknow Division...	845	54	899	389	54	443	7,199	15	66	...	66	37	34,923	32,261	67,184	14,583	52,601
Fyzabad	217	1	218	90	1	91	1,936	1	1	...	1	10	4,704	6,419	11,123	4,609	6,514
Gonda	359	6	365	2	6	8	3,388	...	...	...	...	2	1,263	1,497	2,760	440	2,320
Bahraich	125	...	125	52	...	52	757	...	...	...	...	3	1,951	1,550	3,501	1,377	2,124
Sultánpur	54	4	58	54	4	58	1,894	...	...	...	...	6	11,550	2,131	13,681	4,424	9,257
Partábgarh	85	...	85	85	...	85	288	1	3	...	3	1	1,983	1,753	3,736	609	3,127
Bara Banki	315	...	315	93	...	93	4,121	3	8	...	8	8	9,257	3,821	13,078	4,376	8,702
Total, Fyzabad Division ...	1,155	11	1,166	376	11	387	12,384	5	12	...	12	30	30,708	17,171	47,879	15,836	32,044
TOTAL, N.-W. P. AND OUDH	8,012	219	8,231	3,399	219	3,618	82,587	95	688	2	640	250	285,654	176,262	461,916	142,574	319,342

* The plants are too small to be enumerated.

APPENDIX C.

Statement showing the arboricultural expenditure and receipts in each district of North-Western Provinces and Oudh, during the year 1893-94.

District.	Expenditure on—						Receipts by—		
	Avenues								
	Planted in previous year.	Planted in current year.	Groves.	Nurseries.	Lopping and felling.	Total.	Lopping and felling.	Fruits, grass, &c.	Total.
Dehra Dún	238	161	...	...	...	399	72	9	81
Saháranpur	1,490	403	...	488	...	2,381	1,128	125	1,253
Muzaffarnagar	1,869	1,247	474	243	67	3,900	2,853	75	2,928
Meerut	1,531	453	...	48	...	2,032	1,905	198	2,103
Bulandshahr	1,856	674	39	510	21	3,100	6,212	594	6,806
Aligarh	828	1,059	269	392	55	2,603	4,389	196	4,585
Total, Meerut Division ...	7,812	3,997	782	1,681	143	14,415	16,559	1,197	17,756
Muttra	1,619	...	...	148	33	1,800	594	64	658
Agra	1,744	901	...	436	...	3,081	1,392	812	2,204
Fárukhabad	1,081	542	...	152	25	1,800	954	225	1,179
Mainpuri	953	309	93	119	26	1,500	788	856	1,644
Etáwah	955	...	...	62	...	1,017	269	38	307
Etah	1,204	...	...	83	13	1,300	540	292	832
Total, Agra Division ...	7,556	1,752	93	1,000	97	10,498	4,537	2,287	6,824
Bareilly	1,867	347	...	...	...	2,214	1,128	770	1,898
Bijnor	735	153	...	12	...	900	150	1,602	1,752
Budaun	852	131	74	230	13	1,300	873	631	1,504
Moradabad	1,175	225	...	61	...	1.461	465	1,351	1,816
Sháhjahánpur...	1,380	201	...	147	...	1,728	257	407	664
Pilibhít	397	45	...	152	...	594	24	2,071	2,095
Total, Rohilkhand Division ...	6,406	1,102	74	602	13	8,197	2,897	6,832	9,729
Cawnpore	930	640	...	84	100	1,754	1,518	300	1,818
Fatehpur	867	384	51	93	...	1,395	695	203	898
Bánda	1,826	25	...	602	7	2,460	292	53	345
Hamírpur	782	326	...	284	65	1,457	566	105	671
Allahabad	907	...	471	420	...	1,798	433	1,239	1,672
Jhánsi	5,259	314	48	193	...	5,814	350	400	750
Jalaun	1,471	301	27	231	70	2,100	332	161	493
Total, Allahabad Division ...	12,042	1,990	597	1,907	242	16,778	4,186	2,461	6,647
Benares	841	112	...	47	...	1,000	767	1,441	2,208
Mirzapur	709	545	...	146	...	1,400	249	745	994
Jaunpur	1,189	393	102	386	128	2,198	1,651	119	1,770
Gházipur	407	138	66	161	17	789	357	332	689
Ballia	150	175	...	75	...	400	116	15	131
Total, Benares Division ...	3,296	1,363	168	815	145	5,787	3,140	2,652	5,792
Gorakhpur	1,208	...	133	222	11	1,574	55	630	685
Basti	256	...	128	169	274	827	674	81	755
Azamgarh	681	36	42	42	...	801	325	247	572
Total, Gorakhpur Division ...	2,145	36	303	433	285	3,202	1,054	958	2,012
Almora	135	104	...	61	...	300	5	...	5
Garhwál	(a)	(b)	...	890	...	890	15	128	143
Naini Tal	...	...		...	...	...	...	...	...
Total, Kumaun Division ...	135	104	...	951	...	1,190	20	128	148
Lucknow	297	39	148	963	...	1,447	101	638	739
Unao	349	...	...	53	...	402	285	101	386
Rae Bareli	806	155	...	322	17	1,300	255	79	334
Sitapur	616	473	199	76	123	1,487	755	579	1,334
Hardoi	1,065	330	60	96	49	1,600	612	140	752
Kheri	...	...	...	281	...	281	34	41	75
Total, Lucknow Division ...	3,133	997	407	1,791	189	6,517	2,042	1,578	3,620
Fyzabad	694	33	...	72	...	799	278	315	593
Gonda	...	759	...	40	...	799	536	319	855
Bahraich	705	...	...	88	107	900	507	257	764
Sultánpur	522	403	...	73	...	998	272	282	554
Partábgarh	610	...	6	78	6	700	282	204	486
Bara Banki	726	626	88	...	59	1,499	701	1,294	1,995
Total, Fyzabad Division ...	3,257	1,821	94	351	172	5,695	2,576	2,671	5,247
TOTAL, N.-W. P. AND OUDH ...	45,782	13,162	2,518	9,531	1,286	72,279	37,011	20,764	57,775

(a) and (b) separate account not kept.

APPENDIX D.

Statement showing arboricultural receipts and charges from 1888-89 *to* 1893-94.

District.	Receipts.							Charges.							Average receipts per year.	Average expenditure per year.
	1888-89.	1889-90.	1890-91.	1891-92.	1892-93.	1893-94	Total.	1888-89.	1889-90.	1890-91.	1891-92.	1892-93.	1893-94.	Total.		
Dehra Dún	5	...	102	11	6	81	205	400	448	497	363	401	399	2,508	34	418
Saháranpur... ...	3,111	968	974	1,309	728	1,255	8,343	1,797	2,100	1,902	1,929	1,985	2,381	12,094	1,390	2,016
Muzaffarnaggar ...	5,107	3,258	6,773	4,235	1,807	2,928	24,108	2,863	3,528	3,306	3,466	3,203	3,900	20,266	4,018	3,378
Meerut	3,363	3,963	7,809	1,840	1,323	2,103	20,401	1,891	2,029	1,916	1,726	2,193	2,032	11,787	3,400	1,964
Bulandshahr ...	2,842	4,530	3,065	3,032	3,860	6,800	24,135	2,100	3,642	3,641	3,000	3,200	3,100	18,683	4,023	3,114
Aligarh	1,091	1,413	2,637	1,153	2,021	4,585	12,900	2,400	2,738	2,800	2,582	2,599	2,603	15,722	2,150	2,620
Total, Meerut Divn. ...	15,519	14,132	21,360	11,580	9,745	17,750	70,092	11,451	14,485	14,062	13,066	13,581	14,415	81,060	15,015	13,510
Muttra	957	1,222	638	1,641	826	658	5,942	2,545	1,980	1,597	2,000	1,647	1,800	11,569	990	1,928
Agra	1,476	1,885	1,591	1,278	1,766	2,200	10,200	2,572	2,792	3,042	3,400	3,726	3,081	18,613	1,700	3,102
Farukhabad ...	426	1,019	498	731	528	1,179	4,381	1,800	1,798	1,799	1,796	1,799	1,800	10,792	730	1,799
Mainpuri	814	1,189	1,225	1,255	1,510	1,644	7,637	1,300	1,219	1,070	1,300	1,812	1,500	8,201	1,273	1,367
Etáwah	155	292	80	500	203	307	1,537	1,086	1,396	1,137	1,071	1,008	1,017	6,715	256	1,119
Etah	762	782	720	826	1,089	832	5,011	1,200	1,195	1,200	1,399	1,299	1,300	7,593	835	1,265
Total, Agra Divn. ...	4,590	6,389	4,752	6,231	5,922	6,824	34,708	10,503	10,380	9,845	10,966	11,291	10,498	63,483	5,784	10,580
Bareilly	1,465	1,019	956	1,236	1,826	1,898	8,400	2,376	2,393	2,397	2,242	2,300	2,214	13,922	1,400	2,320
Bijnor	1,836	1,705	1,931	1,599	1,876	1,752	10,699	861	892	899	900	840	900	5,292	1,783	882
Budaun	924	686	765	715	1,094	1,504	5,688	1,300	1,124	1,300	1,500	1,248	1,300	7,772	948	1,296
Moradabad	3,961	2,726	1,713	1,620	1,293	1,816	13,129	2,100	1,600	1,599	1,386	1,598	1,461	9,744	2,188	1,624
Sháhjahánpur ...	1,150	610	270	545	536	664	3,775	1,197	1,173	1,765	1,660	1,484	1,728	9,007	629	1,501
Pilibhít	790	856	972	1,017	1,352	2,095	7,082	283	470	621	736	603	594	3,307	1,180	551
Total, Rohilkhand Divn.	10,126	7,602	6,607	6,732	7,977	9,729	48,773	8,117	7,652	8,581	8,424	8,073	8,197	49,044	8,128	8,174
Cawnpore	2,056	1,828	4,297	1,252	368	1,818	11,619	1,798	1,799	2,213	2,015	1,886	1,754	11,465	1,936	1,911
Fatehpur	524	387	811	658	781	898	4,059	1,300	1,400	1,460	1,396	1,400	1,395	8,351	676	1,392
Bánda	638	334	246	246	366	345	2,175	2,758	2,493	2,850	2,975	2,403	2,460	15,939	363	2,656
Hamírpur	321	262	340	503	381	671	2,478	1,498	1,476	1,709	1,541	1,527	1,457	9,208	413	1,535
Allahabad	941	618	1,455	476	1,202	1,672	6,364	1,768	1,593	1,382	1,774	1,796	1,798	10,111	1,061	1,685
Jhánsi	536	593	1,448	535	590	750	4,452	6,800	7,500	7,039	6,192	6,182	5,814	39,527	742	6,588
Jalaun	276	281	214	278	283	493	1,825	1,997	2,100	2,100	2,100	2,100	2,100	12,497	304	2,083
Total, Allahabad Divn....	5,292	4,303	8,811	3,948	3,971	6,647	32,972	17,919	18,361	18,753	17,993	17,204	16,778	107,098	5,495	17,580
Benares	1,014	1,924	2,940	751	2,901	2,208	11,738	942	997	1,000	1,500	1,200	1,000	6,639	1,956	1,107
Mirzapur	864	514	601	167	783	994	3,923	1,254	1,036	1,498	1,400	1,362	1,400	7,950	654	1,325
Jaunpur	2,929	2,736	1,051	1,786	804	1,770	11,070	2,098	2,292	2,085	2,200	2,238	2,198	13,111	1,845	2,185
Gházipur	443	552	682	408	644	689	3,418	727	850	990	898	900	789	5,144	570	857
Ballia	48	66	96	49	61	131	451	500	500	355	452	400	400	2,607	75	435
Total, Benares Divn. ...	5,298	5,792	5,370	3,155	5,193	5,792	30,600	5,521	5,675	5,928	6,450	6,100	5,787	35,461	5,100	5,909
Gorakhpur	113	544	765	525	764	685	3,396	1,343	1,400	1,380	1,457	1,484	1,574	8,638	566	1,440
Basti	272	282	197	95	654	755	2,255	312	500	700	693	870	827	3,902	376	650
Azamgarh	754	636	591	529	424	572	3,506	800	800	800	796	796	801	4,793	584	799
Total, Gorakhpur Divn.	1,139	1,462	1,553	1,149	1,842	2,012	9,157	2,455	2,700	2,880	2,946	3,150	3,202	17,333	1,526	2,889
Almora	...	...	2	...	...	5	7	250	267	300	300	300	300	1,717	1	286
Garhwál	...	...	120	181	102	143	546	598	799	797	800	761	890	4,645	91	774
Naini Tál	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total, Kumaun Divn. ...	...	...	122	181	102	148	553	848	1,066	1,097	1,100	1,061	1,190	6,362	92	1,060
Lucknow	740	741	804	686	685	739	4,395	1,404	1,808	1,446	1,643	1,260	1,447	9,068	733	1,511
Unao	666	210	206	326	278	386	2,072	404	494	439	452	446	402	2,631	345	439
Rae Bareli	120	51	164	112	254	334	1,038	978	845	654	1,100	1,201	1,300	6,168	173	1,028
Sitapur	163	313	433	573	846	1,334	3,662	932	989	947	985	1,164	1,487	6,504	610	1,084
Hardoi	232	1,448	239	262	757	752	3,690	1,240	1,355	1,649	1,574	1,561	1,600	8,979	615	1,497
Kheri	52	18	31	30	78	75	304	194	300	300	300	300	281	1,675	51	279
Total, Lucknow Divn....	1,973	2,784	1,877	1,989	2,918	3,620	15 161	5,212	5,791	5,435	6,054	6,016	6,517	35,025	2,527	5,838
Fyzabad	849	594	599	286	346	593	3,267	767	712	584	973	800	799	4,635	544	772
Gonda	232	354	210	270	822	855	2,743	629	594	548	241	763	799	3,574	457	596
Bahraich	164	673	431	390	348	764	2,770	890	900	845	899	900	900	5,334	462	889
Sultánpur	392	473	468	629	599	554	3,115	700	899	900	1,050	1,000	998	5,547	519	924
Partábgarh	882	616	276	286	842	486	3,388	576	600	600	800	700	700	3,976	565	663
Bara Banki... ...	528	1,286	1,127	1,523	1,310	1,993	7,769	1,000	1,500	1,320	1,500	1,500	1,499	8,319	1,295	1,387
Total, Fyzabad Divn. ...	3,047	3,996	3,111	3,384	4,267	5,247	23,052	4,562	5,205	4,797	5,463	5,663	5,695	31,385	3,842	5,231
Total, N.-W. P. and Oudh,	46,984	46,460	53,563	38,349	41,937	57,775	285,068	66,588	71,315	71,378	72,462	72,229	72,279	4,26,251	47,511	71,041
Lucknow Exotic plantation	43	...	77	...	...	...	120	73	73	...	77	76	77	376	20	63
Ditto date ditto.	36	...	500	...	...	...	536	495	436	...	600	600	440	2,571	89	428
Agra Exotic ditto	...	...	380	...	...	...	380	400	...	...	400	...	...	800	63	133
Cawnpore Farm and Head-quarters.	...	...	397	...	...	...	397	350	548	...	780	400	400	2,478	66	413
Total ...	79	...	1,354	...	...	...	1,433	1,318	1,057	...	1,857	1,076	917	6,225	238	1,037
GRAND TOTAL ...	47,063	46,460	54,917	38,349	41,937	57,775	286,501	67,906	72,372	71,378	74,319	73,305	73,196	4,32,476	47,749	72,078

ORDERS OF GOVERNMENT.

No. $\frac{643}{I-\frac{86B}{13}}$ OF 1895.

RESOLUTION

REVENUE DEPARTMENT.

Dated Allahabad, the 13th March 1895.

READ—

Letter No. 197A, dated 6th November 1894, from Mr. F. E. Taylor, Officiating Director of Land Records and Agriculture, being the Annual Report on Arboricultural Operations in the North-Western Provinces and Oudh during the year 1893-94.

OBSERVATIONS.—The length of the roads along which avenues had been planted was returned in the last annual report as 7,799 miles. Revised returns show that the actual length was 8,012 miles, which was increased during 1893-94 to 8,231 miles. The new avenues planted were thus 219 miles, of which no less than 96 miles or nearly 44 per cent. were laid out in five districts.

2. In paragraph 11 of the Director's report it is stated that in 13 districts zamindárs and private persons have maintained avenues or planted trees at their own expense, while efforts are being made in Saháranpur and Sultánpur to encourage the planting of avenues independently of the District Boards. It is satisfactory to note that progress has been made in this direction in Jaunpur.

The Director should report the manner in which he proposes that a record should be maintained of trees belonging to private persons who have been allowed to plant on the roadside. It is necessary to prevent such disputes as are reported to have occurred in the Farukhabad district in regard to the ownership of trees privately planted.

3. The total expenditure incurred by District Boards on arboricultural operations was Rs. 72,279, or Rs. 50 less than in 1892-93. The receipts showed a great increase, and were greater than in any of the preceding five years. There was a rise in the income in all but ten districts, and the only noticeable decrease occurred in Partábgarh. There seems to be no adequate reason why in Muttra, Gorakhpur, Rae Bareli, Hardoi, and Kheri the income should not bear a greater proportion to the expenditure, and continued attention to this matter is necessary on the part of the District Boards of those districts. In Etáwah and Ballia and in the Bundelkhand districts the income has improved, and efforts should be made towards further improvement.

4. District operations will no doubt be assisted by the circulation of vernacular translations of the portions of the arboricultural manual which deal with tree planting, and by the use of the map which has now been generally introduced to show the progress of work along the various roads. The Government trusts that the general progress made in 1893-94 will be maintained.

ORDER.—Ordered that a copy of this Resolution be forwarded to the Director of Land Records and Agriculture, North-Western Provinces and Oudh, for information and necessary action.

J. J. D. LATOUCHE,

Chief Secy. to Govt., N.-W. P. and Oudh.